PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT

(51) International Patent Classification 6:		(11) International Publication Number: WO 98/5560		
C12N 9/00	A2	(43) International Publication Date: 10 December 1998 (10.12.9)		
(21) International Application Number: PCT/US9 (22) International Filing Date: 5 June 1998 ((74) Agent: MAJARIAN, William, R.; E.I. du Pont de Nemour and Company, Legal Patent Records Center, 1007 Marks Street, Wilmington, DE 19898 (US).			
(30) Priority Data: 60/048,771 60/049,443 12 June 1997 (06.06.97) 12 June 1997 (12.06.97) (71) Applicant (for all designated States except US): E.I. D DE NEMOURS AND COMPANY [US/US]; 1007 Street, Wilmington, DE 19898 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): FALCO, Savet [US/US]; 1902 Millers Road, Arden, DE 1981 ALLEN, Stephen, M. [US/US]; 12 Stanton Avent Chester, PA 19382 (US). RAFALSKI, J., Antoni [2028 Longcome Drive, Wilmington, DE 19810 (US) William, D. [US/US]; 404 Hillside Road, Wil DE 19807 (US). KINNEY, Anthony, John [US/U Lore Avenue, Wilmington, DE 19809 (US). ABEL Marie [US/US]; 5 Laurel Court, Wilmington, D: (US). THORPE, Catherine, Jane [GB/GB]; 120 Ros Cambridge CB1 3BU (GB).	U PON 7 Mark rio, Ca 10 (US ue, We [US/US]; 60 L, Lyne E 1980	KG, KZ, MD, RU, TJ, TM, European patent (AT, BE, CCY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, N PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GI ML, MR, NE, SN, TD, TG). Published Without international search report and to be republished upon receipt of that report.		
		1,5		
(54) Title: PLANT AMINO ACID BIOSYNTHETIC ENZ	ZYMES			
#0 19 Sec 0 11 MESSEC 3889 (1975 1975 1975 1975 1975 1975 1975 1975	CICTICION II	3		
### 19 ### 19 1 ### 19 ##### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 #### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ### 19 ####	Beg 19 World 141			
BED D MALE AND ELLER AND E	200720000 549 200720000 549 210772000 549	SEQ 10 Min C 1211 CHARGESTON CHARGESTON 1200 MR 17 Min C 1211 CHARGESTON CHARGESTON CHARGESTON 1200 MR 17 MIN C 1211 CHARGESTON CHARGESTON CHARGESTON CHARGESTON CHARGESTON 1201 MR 17 MIN C 1211 CHARGESTON CHARGESTON CHARGESTON CHARGESTON CHARGESTON 1201 MR 18 MIN C 1211 MANAGESTON CHARGESTON 1200 MR 10 MIN C 1211 MANAGESTON CHARGESTON 1200 MR 10 MIN C 1211 CHARGESTON CHARGESTON 1200 MR 10 MIN C 1211 CHARGESTON CHARGESTON 1200 MR 10 MIN C 1211 CHARGESTON CHARGES		
### 1 Per 1 VI CONSTRUCTOR	11 (1) (1) (1) (1) (1) (1) (1) (1) (1) (

(57) Abstract

This invention relates to an isolated nucleic acid fragment encoding a plant enzyme that catalyzes steps in the biosynthesis of lysine, threonine, methionine, cysteine and isoleucine from aspartate, the enzyme a member selected from the group consisting of: dihydrodipicolinate reductase, diaminopimelate epimerase, threonine synthase, threonine dearninase and S-adenosylmethionine synthetase. The invention also relates to the construction of a chimeric gene encoding all or a portion of the enzyme, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the enzyme in a transformed host cell.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho		
AM	Ammenia	FI	Finland	LT	Lithuania	SI	Slovenia
AT	Austria	FR	France	LU		SK	Slovakia
AU	Australia	GA	Gabon		Luxembourg	SN	Senegal
AZ	Azerbaijan	GB		LV	Latvia	SZ	Swaziland
BA	Bosnia and Herzegovina	GE	United Kingdom	MC	Monaco	TD	Chad
BB	Barbados		Georgia	MD	Republic of Moldova	TG	Togo
BE	Belgium	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BF	Burkina Faso	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BG		GR	Greece		Republic of Macedonia	TR	Turkey
	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	æ	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo '	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	zw	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand	2	2040 40
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba .	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		